

APPENDIX

As explained in paragraphs III.25–27 of this Order, below is the list of actionable violations under Counts II, III, and IV, with selected information from the stipulated spreadsheets. (All violations under Count V, which are listed in Plaintiffs' Exhibit 5, are actionable. None of the alleged violations under Counts I, VI, or VII are actionable.)

| Count II | | | | | | | |
|---|-----------------------|-----------------------|--|----------------|------------------|-------------------------------------|--|
| Stipulated Table Number* and Row Number | Start Date & Time | Duration (Hr:Min/Hrs) | Authorization/Permit | Emission Point | Contam- inant | Amount Released/ Emissions (lbs) | Emission Limit/ Permit Limit (lbs/hr) |
| Count II Chemical Plant Permit 4600 (Flare Stack 23) Carbon Monoxide | | | | | | | |
| PX 2E Row 137 | 8/6/2009 2:45 PM | 11:24 | 2.13 of 1069 pounds authorized by Permit 4600 | Flare Stack 23 | Carbon Monoxide | 1,069.00 | 840.59 |
| PX 2E Row 171 | 7/30/2010 10:09 PM | 3:12 | 1.7 of total of 78.1 lbs are authorized under permit 4600 | Flare Stack 23 | Carbon Monoxide | 76.40 | 840.59 |
| Count II Chemical Plant Permit 4600 (Flare Stack 23) NO_x | | | | | | | |
| PX 2E Row 138 | 8/6/2009 2:45 PM | 11:24 | 0.33 of 170 pounds authorized by Permit 4600 | Flare Stack 23 | NOX | 170.00 | 116.81 |
| PX 2E Row 172 | 7/30/2010 10:09 PM | 3:12 | 0.2 of total of 10.8 lbs are authorized under permit 4600 | Flare Stack 23 | NOX | 10.60 | 116.81 |
| Count II Chemical Plant Permit 4600 (Flare Stack 23) Total VOC | | | | | | | |
| PX 2E Row 140 | 8/6/2009 2:45 PM | 11:24 | 404 of 4,217 pounds authorized by Permit 4600 | Flare Stack 23 | TOTAL VOC | 4,217.00 | 1,731.12 |
| PX 2E Row 173 | 7/30/2010 10:09 PM | 3:12 | 2.5 of total of 113.8 lbs are authorized under permit 4600 | Flare Stack 23 | TOTAL VOC | 111.30 | 1,731.12 |

| Count II Chemical Plant Permit 20211 (Flare Stack 12) Carbon Monoxide | | | | | | | |
|--|------------------------|-------|--|-----------------------------|-------------------------------|----------|----------|
| PX 2E Row 179 | 8/10/2010 10:26 AM | 16:12 | 0 lbs of the total .19 lbs are authorized under permit # 20211 | Flare Stack 12 | Carbon Monoxide | 0.19 | 67.73 |
| PX 2E Row 188 | 3/24/2011 8:50 AM | 5:35 | Portions may be authorized under Permit #20211 | Flare Stack 12 | Carbon Monoxide | 1.67 | 67.73 |
| Count II Chemical Plant Permit 20211 (Flare Stack 12) Hydrochloric Acid/Hydrogen Chloride | | | | | | | |
| PX 2E Row 180 | 8/10/2010 10:26 AM | 16:12 | 56.82 lbs of the total 9042.8 lbs are authorized under permit # 20211 | Flare Stack 12 | Hydrogen Chloride | 8,985.98 | 1,132.10 |
| PX 2E Row 193 | 4/1/2011 3:57 AM | 3:07 | 10.56 lbs of the total 6653.43 lbs are authorized under Permit #20211 | Flare Stack 12 | Hydro- chloric acid | 6,642.87 | 1,132.10 |
| PX 2E Row 200 | 3/29/2012 12:04 AM | 9:55 | 11321.00 lbs of the 20500.68 lbs are authorized by Permit 20211 | Flare Stack 12 | Hydrogen Chloride | 9,179.68 | 1,132.10 |
| PX 2F Row 2353 | 12/11/2012 10:42 AM | 14.3 | 20211 | Flare Stack 12 (FL12) | HCl (Hydrogen Chloride) | 462.30 | 1132.10 |
| Count II Chemical Plant Permit 20211 (Flare Stack 12) NOX | | | | | | | |
| PX 2E Row 181 | 8/10/2010 10:26 AM | 16:12 | 0 lbs of the total .9 lbs are authorized under permit # 20211 | Flare Stack 12 | NOX | 0.90 | 13.15 |
| PX 2E Row 189 | 3/24/2011 8:50 AM | 5:35 | Portions may be authorized under Permit #20211 | Flare Stack 12 | NOX | 0.33 | 13.15 |
| PX 2E Row 194 | 4/1/2011 3:57 AM | 3:07 | 0 lbs of the total 10.06 lbs are authorized under Permit #20211 | Flare Stack 12 | NOX | 10.06 | 13.15 |

| Count II Chemical Plant Permit 20211 (Flare Stack 12) Total VOC | | | | | | | |
|---|-----------------------|-------|---|-----------------------------|------------------------------|--------|----------|
| PX 2E Row 182 | 8/10/2010 10:26 AM | 16:12 | 55.76 lbs of the total 330.7 lbs are authorized under permit # 20211 | Flare Stack 12 | TOTAL VOC | 480.24 | 2,137.54 |
| PX 2E Row 190 | 3/24/2011 8:50 AM | 5:35 | Portions may be authorized under Permit #20211 | Flare Stack 12 | TOTAL VOC | 5.98 | 2,137.54 |
| PX 2E Row 195 | 4/1/2011 3:57 AM | 3:07 | 6.04 lbs of the total 214.36 lbs are authorized under Permit #20211 | Flare Stack 12 | TOTAL VOC | 208.32 | 2,137.54 |
| Count II Chemical Plant Permit 36467 (Flare 28) Carbon Monoxide | | | | | | | |
| PX 2F Row 1316 | 2/22/2009 7:00 AM | 6.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 | CO (Carbon Monoxide) | 12.70 | 992.28 |
| PX 2F Row 1320 | 2/25/2009 7:00 AM | 6.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 | CO (Carbon Monoxide) | 163.00 | 992.28 |
| PX 2F Row 1343 | 3/6/2009 1:45 PM | 24.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 | CO (Carbon Monoxide) | 83.90 | 992.28 |
| PX 2F Row 1356 | 3/13/2009 4:40 PM | 1.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 | CO (Carbon Monoxide) | 3.52 | 992.28 |
| Count II Chemical Plant Permit 36467 (Syngas Fugitives) Hydrogen Sulfide | | | | | | | |
| PX 2F Row 1266 | 1/20/2009 11:00 PM | 3.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 (FS28) | H2S (Hydrogen Sulfide) | 0.50 | 28.40 |
| PX 2F Row 1312 | 2/19/2009 11:00 PM | 9.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 (FS28) | H2S (Hydrogen Sulfide) | 0.01 | 28.40 |
| PX 2F Row 1645 | 12/28/2009 4:00 PM | 2.0 | 36476/PSD-TX- 996M1 | Flare Stack 28 (FS28) | H2S (Hydrogen Sulfide) | 61.66 | 28.40 |

| Count III | | |
|--|-----------------------|---|
| Stipulated Table Number* and Row Number | Start Date & Time | Cause Reported in STEERS |
| Count III HRVOC Rule Olefins Plant | | |
| PX 3 Row 5 | 6/25/2007 2:00 PM | LC01 A/B compressor trip resulted in flaring. Exceeded flare (PRIMFL) opacity limit for 15 minutes, VOC hourly limits for 3 hours., HRVOC hourly limit for 2 hours. Total emissions from Primary and Secondary Flare: 10,000 lbs VOC, 9827 lbs CO, 1888 lbs NOX, 5 lbs H2S, <1 lb SO2 |
| PX 3 Row 6 | 1/3/2008 2:18 PM | LC01 A/B compressor trip resulted in flaring. Exceeded Primary flare (PRIMFL) and Secondary Flare (SECFL) opacity limit, VOC hourly limit for 25 hours, HRVOC hourly limit for 16 hours. |
| PX 3 Row 7 | 8/17/2008 12:00 PM | Compressor trips (LC01 and LC02) in the Cold Ends Unit resulted in flaring at the Primary Flare (PRIMFL) over the HRVOC hourly limit for two separate hours and over the permit VOC hourly limit for three separate hours. |
| PX 3 Row 8 | 9/3/2008 12:30 PM | During a plant upset, flaring from the primary (PRIMFL) and Secondary (SECFL) flares exceeded the PAL hourly VOC limit for 1 hour and the HRVOC limit for 1 hour ; the Secondary flare pilots were extinguished for a short period. |
| PX 3 Row 9 | 4/19/2009 5:00 AM | During a plant upset, flaring from the primary (PRIMFL) and Secondary (SECFL) flares exceeded the PAL hourly VOC limit for 11 hours and the HRVOC limit for 7 hours. |
| PX 3 Row 10 | 1/9/2010 8:00 AM | Extreme freezing weather conditions resulted in flaring with opacity for more than 5 minutes in two consecutive hours and site-wide emissions over the permit VOC hourly limit for six hours and over the HRVOC limit for two hours. Temperatures below freezing caused a level instrument malfunction on storage tank, XZTK-02, resulting in wastewater outside of the waste management unit. |
| PX 3 Row 11 | 2/2/2011 12:13 AM | During extreme freezing weather conditions, instrument malfunctions and equipment shutdowns resulted in flaring with opacity for more than 5 minutes in two consecutive hours. Site-wide emissions also intermittently exceeded the PAL hourly VOC limit and the hourly HRVOC limit. |
| Count III HRVOC Rule Chemical Plant | | |
| PX 3 Row 15 | 9/28/2008 3:15 PM | During startup after Hurricane Ike, reactor R-5102 temperature instability caused pressure increase, resulting in safety relief valve to lift to atmosphere, exceeding the 1200 lb/hr HRVOC limit. |
| PX 3 Row 17 | 3/14/2012 8:00 AM | Incorrect lineup of safety relief valve PO-6101 resulted in an atmospheric relief event that exceeded the 1200 lb/hr HRVOC limit. |

| Count IV | | | | | | | |
|---|------------------------|------------------------|------------------|---------------|-------------|-------------------------------------|-------------------------|
| Stipulated Table Number* and Row Number | Start Date & Time | End Date & Time | Duration (Hours) | Contam -inant | Opacity (%) | Reported Emission Limit (% Opacity) | Plant; Title V Permit # |
| Count IV Smoking Flares Rule Refinery | | | | | | | |
| PX 4 Row 4 | 10/12/2007 2:32 PM | 10/12/2007 2:48 PM | 0.27 | Opacity | 100.00% | 0.00% | Refinery; O-01229 |
| PX 4 Row 5 | 10/12/2007 2:32 PM | 10/12/2007 2:48 PM | 0.27 | Opacity | 100.00% | 0.00% | Refinery; O-01229 |
| PX 4 Row 16 | 9/22/2011 11:28 AM | 9/22/2011 11:43 AM | 0.25 | Opacity | 100.00% | 0.00 | Refinery; O-01229 |
| PX 4 Row 17 | 9/22/2011 11:28 AM | 9/22/2011 11:43 AM | 0.25 | Opacity | 100.00% | 0.00 | Refinery; O-01229 |
| PX 4 Row 18 | 3/6/2013 10:57 AM | 3/6/2013 11:12 AM | 0.25 | Opacity | 100.00% | 0.00 | Refinery; O-01229 |
| Count IV Smoking Flares Rule Olefins Plant | | | | | | | |
| PX 4 Row 21 | 12/10/2005 1:04 PM | 12/10/2005 3:45 PM | 2.68 | Opacity | 100.00% | 30.00% | Olefins; O-01553 |
| PX 4 Row 22 | 1/10/2006 11:54 AM | 1/10/2006 3:00 PM | 3.10 | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 23 | 1/10/2006 11:54 AM | 1/10/2006 3:00 PM | 3.10 | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 24 | 10/6/2006 7:20 PM | 10/7/2006 12:20 AM | 5.00 | Opacity | 15.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 25 | 6/25/2007 2:00 PM | 6/25/2007 5:00 PM | 0.25 | Opacity | 60.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 26 | 6/25/2007 1:55 PM | 6/26/2007 2:06 AM | 12.18 | Opacity | 60.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 27 | 1/3/2008 2:18 PM | 1/5/2008 7:20 AM | 41.03 | Opacity | 20.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 28 | 1/3/2008 2:18 PM | 1/5/2008 7:20 AM | 41.03 | Opacity | 80.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 29 | 10/27/2008 12:06 PM | 10/27/2008 12:13 PM | 0.12 | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 30 | 12/10/2009 4:50 PM | 12/11/2009 12:50 AM | 8.00 | Opacity | 25.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 31 | 12/10/2009 4:50 PM | 12/11/2009 12:50 AM | 8.00 | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 32 | 1/9/2010 8:00 AM | 1/9/2010 7:05 PM | 11.08 | Opacity | 30.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 35 | 2/10/2010 10:54 AM | 2/10/2010 11:11 AM | 0.28 | Opacity | 31.00% | 0.00% | Olefins; O-01553 |

| | | | | | | | |
|--|----------------------|-----------------------|---|---------|---------|-------|----------------------|
| PX 4 Row 36 | 2/2/2011 12:13 AM | 2/6/2011 7:00 PM | 114.78; This event is identified as "flaring with opacity for more than 5 minutes in two consecutive hours" in the deviation report | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 37 | 2/2/2011 12:13 AM | 2/6/2011 7:00 PM | 114.78; This event is identified as "flaring with opacity for more than 5 minutes in two consecutive hours" in the deviation report | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 38 | 2/2/2011 12:13 AM | 2/6/2011 7:00 PM | 114.78; This event is identified as "flaring with opacity for more than 5 minutes in two consecutive hours" in the deviation report | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 39 | 4/14/2012 4:00 PM | 4/14/2012 7:59 PM | 3.98 | Opacity | 50.00% | 0.00 | Olefins; O-01553 |
| PX 4 Row 40 | 6/22/2012 9:00 AM | 6/22/2012 10:00 AM | 1.00 | Opacity | 100.00% | 0.00% | Olefins; O-01553 |
| PX 4 Row 41 | 1/8/2013 6:00 AM | 1/8/2013 5:00 PM | 11.00 | Opacity | 80.00% | 0.00% | Olefins; O-01553 |
| Count IV Smoking Flares Rule Chemical Plant | | | | | | | |
| PX 4 Row 44 | 8/6/2009 2:54 PM | 8/6/2009 4:35 PM | 1.68 | Opacity | 100.00% | 0.00% | Chemical; O-02269 |
| PX 4 Row 45 | 8/6/2009 2:54 PM | 8/6/2009 4:35 PM | 1.68 | Opacity | 100.00% | 0.00% | Chemical; O-01278 |
| PX 4 Row 46 | 8/6/2009 2:54 PM | 8/6/2009 4:35 PM | 1.68 | Opacity | 100.00% | 0.00% | Chemical; O-01278 |
| PX 4 Row 47 | 8/6/2009 2:54 PM | 8/6/2009 4:35 PM | 1.68 | Opacity | 100.00% | 0.00% | Chemical; O-01278 |

* "PX" refers to Plaintiffs' Exhibit.